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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,757	10/08/2003	Pramodh K. Mereddy	03-1142	8286

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EXAMINER

MCLEAN MAYO, KIMBERLY N

ART UNIT

PAPER NUMBER

2187

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/681,757	Applicant(s) MEREDDY ET AL.	
	Examiner Kimberly N. McLean-Mayo	Art Unit 2187	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3,9-12 and 21-33 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3,9-12 and 21-25 is/are allowed.
- 6) ☒ Claim(s) 26-28 and 31-33 is/are rejected.
- 7) ☒ Claim(s) 29 and 30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

1. The enclosed detailed action is in response to the Amendment submitted on January 9, 2006.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 26-28 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Blumenau (USPN: 6,170,037).

Blumenau discloses partitioning an address range for a plurality of disk drives into a first range and a second range, wherein the first range has a performance parameter faster than the second (Figure 6, address range storing G1, G2; G3, G4; C 11, L 1-24; also refer to Figure 11); writing a first data block in the first range of a first drive of the disk drives; generating a first mirrored data block by mirroring the first data in the second range of a second drive of the disk drives (C 11, L 1-24; Figure 11, C 17, L 44-67; C 18, L 1-9).

Regarding claim 27, Blumenau discloses generating both the first data block and a second data block by striping an original block (C 17, L 65-67); and writing the second data block to the first range of a third drive of the disk drive (refer to Table [C 18, L 1-9] group G 2,5; the second data block is written to Drive\_2).

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Regarding claim 28, Blumenau discloses generating a second mirrored data block by mirroring the second data block and writing the second mirrored data block to the second range of a fourth drive of the disk drives (refer to Figure 11; C 16, L 19-28; Blumenau teaches that any number of mirrors may be used; as shown in figure 11, each data block is mirrored in each the second range of the other disk drives and thus a 4 way mirror would also store the second mirrored data in the second range of the fourth disk).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blumenau (USPN: 6,170,037).

Regarding claim 32, Blumenau discloses the limitations cited above in claim 26, however, Blumenau does not disclose the disk drives comprising a RAID 10 system. RAID 10 systems perform mirroring (fault tolerance data) and then striping of data. RAID level 10 devices are well known in the art for providing a fault tolerant system by performing both mirroring and striping data. Hence, it would have been obvious to one of ordinary skill in the art to use Blumenau's teachings in a RAID 10 device for the desirable purpose of providing a fault tolerant system.

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Regarding claim 33, Blumenau discloses the limitations cited above in claim 26, however, Blumenau does not disclose a RAID 0+1 system. RAID 0 + 1 systems stripe data and then mirror the data (fault tolerance data). RAID level 01 devices are well known in the art for providing a fault tolerant system by mirroring and striping data. Hence, it would have been obvious to one of ordinary skill in the art to use Blumenau teachings in a RAID 01 device for the desirable purpose of providing a fault tolerant system.

#### ***Allowable Subject Matter***

6. Claims 1-3, 9-12 and 21-25 are allowed.
7. Claims 29-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

8. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly N. McLean-Mayo whose telephone number is 571-272-4194. The examiner can normally be reached on Mon, Wed, Thurs (10-4), Tues (9:45 - 6:15).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on 571-272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

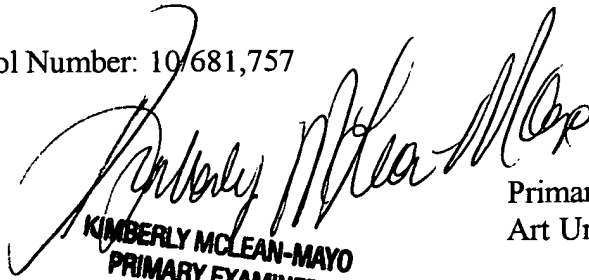
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kimberly N. McLean-Mayo

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A large, stylized handwritten signature in black ink, appearing to read 'Kimberly McLean-Mayo', is written over the printed name and title.

Primary Examiner  
Art Unit 2187

**KIMBERLY MCLEAN-MAYO  
PRIMARY EXAMINER**

KNM

April 3, 2006